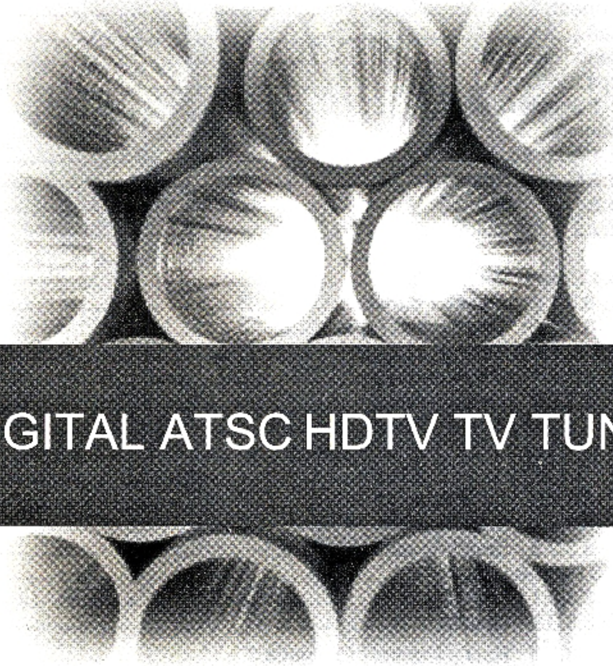
DTV5000HD

User Manual



DIGITAL ATSC HDTV TV TUNER



CONTENT

The Receiver you have just purchased has been manufactured to meet international safety standards. We recommend that you carefully read the safety instructions below.



POWERING:
100 -120VAC ~ 57Hz-63Hz



LIQUIDS:
Take care not to spill any liquids over the Receiver, or splash it.
Avoid placing recipients or objects with liquids on or next to the Receiver.



SMALL OBJECTS:
Avoid placing small metallic objects close to the unit. These could accidentally enter through the ventilation slots and cause serious damage.



CLEANLINESS:
Unplug the Receiver from the mains before cleaning it.
Use a slightly damp, soft cloth (no detergent) to clean the outside of the Receiver.



VENTILATION:
Place the Receiver in a well-ventilated area so that the slots are not blocked in any way. Avoid exposure to the sun or to other sources of heat.
Do not place on top of other equipment.



CONNECTIONS:
Carry out the recommended connections only to avoid any possible damage.

WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT TAKE THE COVER OFF. NO PART OF THE RECEIVER CAN BE REPAIRED BY THE USER. PLEASE CONSULT A QUALIFIED TECHNICIAN FOR ANY REPAIRS.



This symbol indicates "dangerous voltage" - there is the risk of an electric shock.



This symbol indicates that there are some important instrutions for this particular product.

1 Preface

A Digital ATSC HD/SD TV Tuner is a product that enables you to see a large variety of channels that are supplied by ATSC broadcast stations. This User manual explains everything from how to install the Receiver to the steps that need to be taken to improve various different functions. This manual also describes in detail a series of functions that are only available in this Receiver, so that you can use them properly. Please be sure to read this manual so that the Receiver is installed and used correctly, and make sure to keep it in a safe place for future reference.

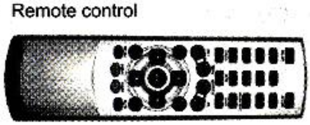
2 General Features

- Auto Sleep
- Remote control
- Automatic channel scan
- User friendly on screen Menu
- Support English, French, Spanish
- Support Antenna Signal Pass through
- MPEG-2 Digital & Fully ATSC compliant
- Program information on the PG (Program Guide)
- Support channel 3/4 RF Modulator output via slide switch selection
- Parental Control is available which is supported view-controlled by access system

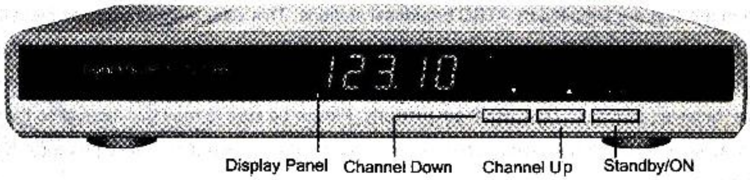
3 Equipment

Check that all of the parts are in the box

<table>
<tr><td>● Digital ATSC Converter Box
</td><td rowspan="3">● User Manual

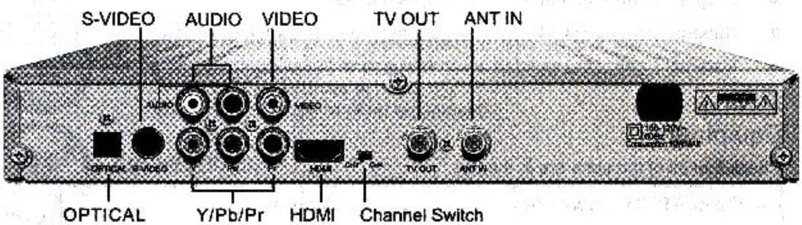
</td></tr>
<tr><td>● Remote control
</td></tr>
<tr><td>● "AAA","LR03" or "AM-4" batteries
</td></tr>
</table>

4 Front Panel



Button	Function
PWR	Switch between normal operational mode and standby mode
CH ▲	Goes up through the channels
CH ▼	Goes down through the channels
Display Panel	Power on : Show current channel Stand by : Off

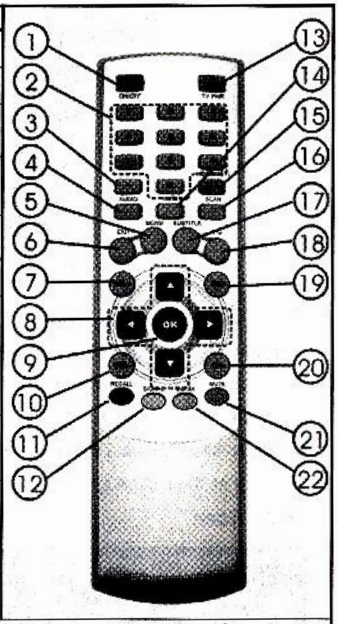
5 Rear Panel



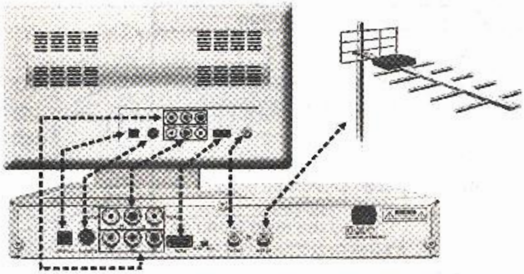
Name	Function
ANT IN	Antenna input or ATSC 's signal input
TV OUT	Support RF Modulator output to switch channel 3/4
Y/Pb/Pr	Component video (480i, 720P,1080i)
VIDEO	Composite video signal output
S-VIDEO	S-Video signal output
HDMI	Digital Video Audio Output (480i, 720P,1080i)
AUDIO R	Audio output (Right channel)
AUDIO L	Audio output (Left channel).
OPTICAL	Digital Audio Output
Channel Switch	Connection to a serial port to update the software

6 Remote control

Index	Button	Function
1	⏻	Power On/Off control
2	0 ... 9	Channel number
3	-	Dash Key
4	AUDIO	Key on the remote to change audio soundtrack (Multi-language).
5	MENU	Display the main Menu on screen.
6	EXIT	Exit key
7 10	VOL+、VOL-	Increase or decrease the volume
8	◄, ►, ▲, ▼	OSD[on screen display] adjustment
9	OK	OSD[on screen display] selection key
11	RECALL	Return to previous channel
12	SIGNAL	Signal quality of current channels
13	TV PWR	Learn TV power key
14	INFO	Push this button to find out the program information of a selected channel.
15	HD/SD (SET)	Change HD/SD resolution (set function key)
16	SCAN	Auto scan channel
17	SUBTITLE	Select subtitle function
18	PG	Display the Simple Guide.
19 20	CH-/CH+	Goes up or down through the channel numbers.
21	MUTE	Switch the sound off.
22	ZOOM	Zoom in or out image.



7 Quick Installation

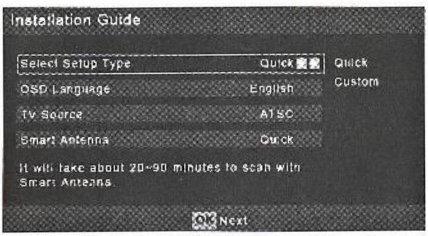


7.1 Connect

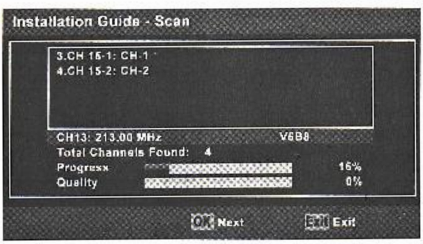
Connect the TV and all the other equipment that is connected to the box. Your receiver is equipped with a signal strength indicator to facilitate the optimum adjustment of the antenna.

Note: To allow antenna signal passing through to your TV, use a RF cable to connect TV and the receiver as the picture shows.

7.2 Scan



This page is to select the Setup Type between "Quick" and "Custom". Default is "Quick". User can choose "Quick" to setup quickly or select "Custom" to define following setup. User can set either "ATSC" or "Cable" TV Source and either "Full" or "Quick" Smart Antenna scan.



The entire input frequency range will be scanned for programs. Please note any further messages on the screen. It may take up to 3 minutes to complete the scan. You can terminate the scan by pressing the EXIT key.



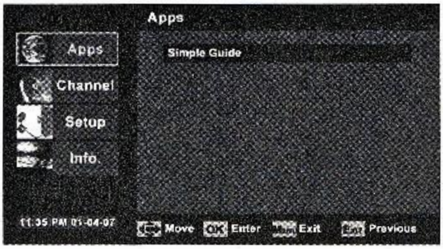
After all the tuned programs are saved, box will stay in the tuning menu. Please note messages displayed on screen. Press "EXIT" to return to normal operation.

8 Main Menu Structure

1st Layer	2nd Layer	3rd layer	4th Layer	Description / legal Value
Apps	Simple Guide			Enter Simple Guide OSD
Channel	Auto Scan			press ok / exit key to stop auto scan and watch First channel (only available after auto-scan is done)
	Manual Scan			1.press Right/Left to select channel you wanted 2.press OK to make a scan on selected channel
Setup	Screen Setting	Screen Format		Letter / Center / Full
		TV's Screen Ratio		16:9 / 4:3
	System Setting	OSD Language		English / Spanish / French
		Audio Setting	Audio Language	English / Spanish / French
			Audio Channel	(L/R) / Left / Right / Mixed
			SPDIF	OFF / PCM / AC3
		TV Source		ATSC / Cable
		Auto Sleep		OFF / 15min / 30min / 1hr / 2hr / 4hr
		Smart Antenna		Quick / Full (Optional)
	Parental Control	Lock System		On / Off
		Country		USA / Canada
		Rating Control	English Rating (Canada)	
			French Rating (Canada)	
			Digital Rating (Canada)	
		Change Password		Default (1234)
	Close Caption	Caption Type		Off / Service1-6 / CC1-4 / TT1-4
		Customization		On / Off
		Caption Size		Small / Standard / Large
		Foreground Color		Black / White / Red / Green / Blue / Yellow / Magenta / Cyan
		Foreground Opacity		Full / High / Half / Low / Zero
		Background Color		Black / White / Red / Green / Blue / Yellow / Magenta / Cyan
		Background Opacity		Full / High / Half / Low / Zero
	Time Setting	Time Format		12H / 24H
		Time Zone		Hawaii / Alaska / Pacific / Mountain / Central / Eastern
		Auto Daylight Saving		Yes / No
		Follow Daylight Saving		Yes / No
	Factory Default	Load factory default		Yes / No
Info	System Information			

8.1 Apps

Display channel information.

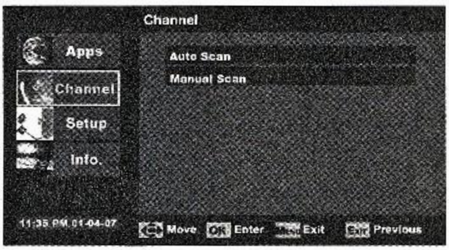


8.1.1 Simple Guide

Simple guide lists the following program's information of current channel.

8.2 Channel

Search for programs by Auto or Manual scan

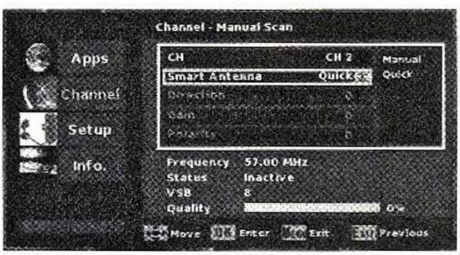


8.2.1 Auto Scan

Auto Scan will erase the database first, and scan default frequency and bandwidth by Country Setting.

8.2.2 Manual Scan

Manual Scan doesn't erase the database but add the scanning results into it. User has to know the Frequency and Bandwidth for scanning.



8.2.2.1 Manual

In manual scan, user can define parameters for smart antenna setup. There are three parameters: direction, gain, polarity.

- Direction: 16 Directions are availabe.
- Gain: 4 Gain Values are available.
- Polarity: 2 Polarities are available.

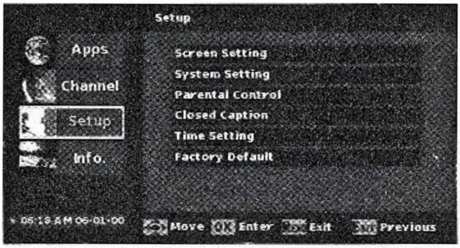
【Note】: "Quick" in smart antenna setup is the default setting and is recommended for most users; Manually input parameters for smart antenna is only recommended for advanced users or professional installers. You can refer www.antennaweb.org for more antenna information. It is a web site from CEA（Consumer Electronics Association）.

8.2.2.2 Quick

Scan programs quickly. Meanwhile, three parameters are invalid.

8.3 Setup

Setup functions of program display.



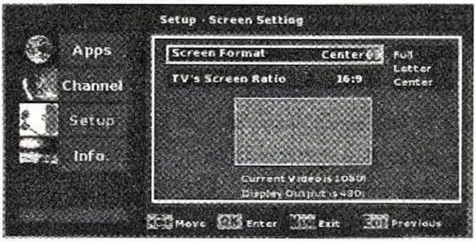
8.3.1 Screen Setting

8.3.1.1 Screen Format

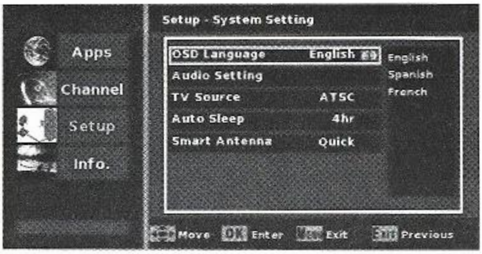
Set display format for watching program among Full,Letter or Center.

8.3.1.2 TV's Screen Ratio

This function provides selection of an appropriate picture format for your TV set, including 4:3 or 16:9.



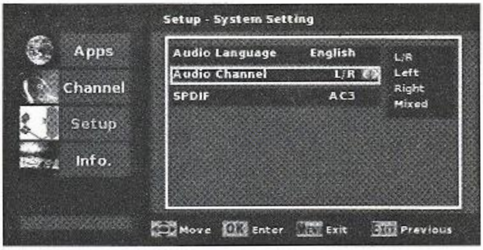
8.3.2 System Setting



8.3.2.1 OSD Language

This option allows the user to set the preferred user interface [UI] display including English, Spanish, French.

8.3.2.2 Audio Setting



8.3.2.2.1 Audio Language

Select your preferred language, including English, Spanish and French.

8.3.2.2.2 Audio Channel

Select the format of audio channel output, incluidng L/R, Left, Right or Mixed.

8.3.2.2.3 SPDIF

SPDIF specifies a Data Link Layer protocol and choice of Physical Layer specifications for carrying digital audio signals between devices and stereo components. User can change the audio output among OFF, PCM or AC3.

8.3.2.3 TV Source

Select either ATSC or Cable source.

8.3.2.4 Auto Sleep

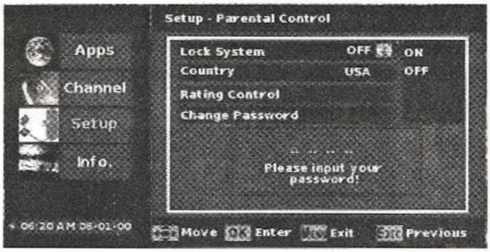
Offer six selections of setting sleep time including OFF, 15min, 30min, 1hr, 2hr and 4hr. The default is 4hr.

8.3.2.5 Smart Antenna (Optional)

User can choose "Quick" or "Full" function to start smart antenna scan.

8.3.3 Parental Control

Set suitable range of program level for children.



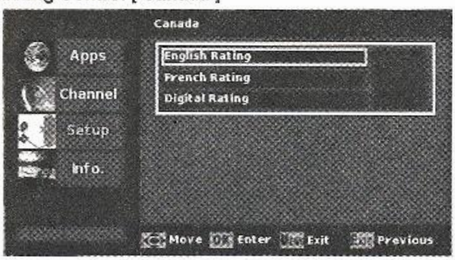
8.3.3.1 Lock System

Turn ON or OFF the lock system.

8.3.3.2 Country

Set located country either USA or Canada

8.3.3.3 Rating Control [Canada]



There are 2 or 3 rating options including English Rating, French Rating and Digital Rating. (Note: The Digital Rating item is only shown when the program contains the digital rating info)

- English Rating:

  The English includes the following option:C, 8+,G,PG,14+,18+,E

- French Rating:

  The French includes the following option:G, 8+,13+,16+,18+,E

- Digital Rating

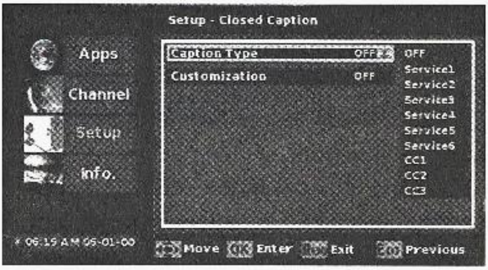
  The Digital Rating includes following options: 7+,10+,13+,16+,18+

8.3.3.4 Change Password

Use this feature to define a new password to manage.

8.3.4 Close Caption

The Closed Caption [CC] is a data service which usually carries the spoken dialog in the current watching service in text format and which is usually in sync with the delivered audio. However, it is not necessary to always carry the dialog information in CC. The CC has two different formats.



8.3.4.1 Caption Type

- Analog mode (NTSC-CC)

  Analog closed captions are captions formatted and presented in the current analog television system. Types of analog closed caption are TT1, TT2, TT3, TT4, CC1, CC2, CC3 and CC4.

- Digital mode (ATSC-CC)

  The display of captioning information can be customized to user needs. The customization features are only functional in digital closed caption. Types of Digital closed caption are Service1, Service2, Service3, Service4, Service5, Service6.

8.3.4.2 Customization

Select ON to set following functions or select OFF without setting any functions.



8.3.4.3 Caption Size

Captions can be displayed in different Font sizes including Small, Standard and Large.

8.3.4.4 Foreground Color

Captions can be displayed in different Font colors including Black, White, Red, Green, Blue, Yellow, Magenta and Cyan.

8.3.4.5 Foreground Opacity

Set different opacity types of text. Options are Full, High, Half, Low and Zero.

8.3.4.6 Background Color

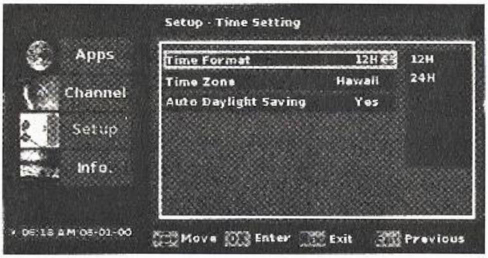
Set different Background colors including Red, Green, Blue, Yellow, Magenta, Cyan, Black and White.

8.3.4.7 Background Opacity

Set different opacity types of background including Full, High, Half,Low and Zero.

8.3.5 Time Setting

Set time mode.



8.3.5.1 Time Format

User changes between 12H/24H time format.

8.3.5.2 Time Zone

User can select your located country.

8.3.5.3 Auto Daylight Saving

Summer time function provides Daylight Savings Time in summer, and automatically switch back to the normal timings in winter.

8.3.5.4 Follow Daylight Saving

Select Yes or No.

8.3.6 Factory Default

Return factory default [password: 1234]

8.4 Info

8.4.1 System Information

This item displays the relevant information of this box.

Product HW version.

Product SW version.

Product Boot version.

8.4.2 Universal Remote Control

If you want to program your existing remote control so that it can control this receiver, please use the code in the table.

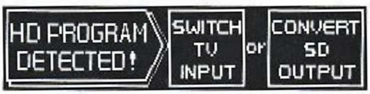
Universal RCU Brand / Model / Match code	Function	Customer Code	Key Code
Radio Shack/ 15-2200 or 15-2142/ NEC TV Code 0030	Power	0xFB04	0x08
	Ch Up		0x00
	Ch Down		0x01
	Vol Up		0x02
	Vol Down		0x03
Magnavox / REM 340 / NEC Code 0024	Power	0xE718	0x08
	Ch Up		0x00
	Ch Down		0x01
	Vol Up		0x02
	Vol Down		0x03

【Note】: All code are using NEC protocol

8.4.3 Multi-function keys

8.4.3.1 HD/SD switching

As you see below message, please follow steps.



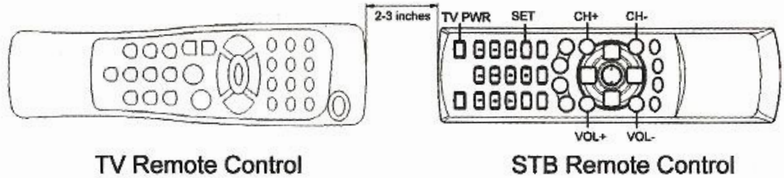
- Change your connetor to HDMI / Componet output. Or
- Press HD / SD key on RCU to convert format.

Press the key HD/SD key again to return to the television program last selected.

8.5 Extra feature on the Remote

- There are 5 learning functions including TV PWR, VOL+,VOL-,CH+ and CH-.
- Step to Configure the "TV VOL+,VOL-,CH+ and CH-" key on your remote control.
- Purpose: The learning key can be used to control your TV through the learning procedure. Below steps provide the steps:

1. Put your TV remote control and the STB remote control on firm and stable surface (for example, the living room table)
2. Aim two remote controls head to head as shown below. Keep 2~3 inches distance in between.



3. On the STB remote, press and hold the "SET" key for at least 3 seconds till LED flash then release it.
4. On the STB remote, press TV PWR button once.
   As LED lights , the STB remote control enters the "learning" mode.
5. On the TV remote, press also TV PWR button once.
   As LED flashes , it stands for learning procedure successfully.
6. If you intend to learn the other functions, i.e. VOL+,VOL-,CH+ and CH-. Please start from step 4 all over again
   If you complete learning step, press SET button on the STB remote to quit learning mode.
7. Try to operate TV set by using the learning buttons on the STB remote as follows.
   a. For Power on-off, push TV PWR blue button.
   b. For Volume Up-and-Down, use learning buttons, Vol+ and Vol-.
      Vol- for lowering volume and Vol+ for increasing volume.
   c. For Channel Up-and-Down, use learning buttons, CH+ and CH-.
      CH+ for increasing Channels CH- for decreasing Channels.
8. If your TV set has no response , please start from step 1 again and slightly increase or decrease the distance between two remote.

Note:

- During learning mode, the STB remote is waiting to receive remote command from outside. If no other remote command is given to the remote for 15 seconds or any one key is pressed, the remote will exit the learning mode.
- Some TV remote control may be so complex as to your learning invalidly.
- This function supports over 80% TV remote controls on the market.

9 Specifications

Section	Detailed section	Explanation	
Antenna Input Signal	Input Frequency	57MHz to 803MHz	Cable: 57MHz to 860MHz
	Channels	2-13 (VHF) 14-69 (UHF)	Cable: 2-135
	Bandwidth	6 MHz	
	Antenna Input	75Ω Female (F-Type)	
	Antenna Output	75Ω Female (F-Type)	
	Modulation Modes	8VSB,8VSB MP@ML, 64/256 QAM	
Video	Algorithm	MPEG-2 Digital & Full ATSC Compliant	
	HD Digital Video Output	HDMI Output Native Mode: 480i ,720P, 1080i	
	HD Analog Video Output	HD YPbPr Output Native Mode:480i, 720P, 1080i	
	SD Video Output	CVBS (Composite) S-Video (Y-C)	
Audio	Algorithm	MPEG-1 layer 1 and 2 MPEG-2 layer 2	
	Analog Audio Output	Stereo (RCA jacks) 2.0Vrms Max, >10K ohm(1 Sets)	
	Digital Audio Output	SPDIF optical	
Power	Power	AC 100V - 120V Max. 10 W	
	Operating Frequency	57~63Hz	
	Standby Power Consumption	Less than 1 W	
Environmental Condition	Operating Temperature	0 ~ 40 ℃	
	Storage Temperature	-10 ~ +50 ℃	
	Operating Humidity	5% ~ 90 % Non-condensed	
	Storage Humidity	5% ~ 90 % Non-condensed	
	Weight	Approx 0.87Kg	
	Dimension	280mm X 44mm X 156mm (WxHxD)	

Version [C] v1.0